Bacteria and Benthic TMDLs in Occoquan Watershed Stream Segments

3rd Public Meeting

March 15, 2006

Central Community Library

Manassas, Virginia

Agenda

- **Introductions and Background**

  Bryant Thomas, VA DEQ

- **Recap of Public Meeting 2 and Presentation of Draft Benthic TMDLs for Bull Run, Popes Head Creek and South Run**

  Raed El-Farhan, Louis Berger Group

- **Presentation of Draft Bacteria TMDLs**

  Raed El-Farhan, Louis Berger Group

- **Next Steps**

Why are we here?

- **Periodically, the Department of Environmental Quality assesses water sampling data, by comparison to standards, and reports the status or health of Virginia streams to U.S. EPA and the public.**

- **The impaired or problem waters are listed in an EPA report called the 303(d) Impaired Waters List.**

- **Once problem waters are identified, Virginia must determine how to reduce pollution so the water meets water quality standards.**

- **The purpose of this project is to address the identified bacteria and benthic impairments in streams in the Occoquan watershed.**

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Summary of TMDL Study Impairments

Stream	County/City	Length (mi.)	Year Listed	Impair- ment
Broad Run	Prince William	1.51	2002	Bacteria
Broad Run	Prince William	7.26	2002	Bacteria
Broad Run	Prince William	1.06	2004	Bacteria
South Run	Fauquier, Prince William	2.34	2004	Bacteria
		2.34	1996	Benthic
Kettle Run	Prince William	7.59	2002	Bacteria
Occoquan River*	Prince William	1.61	2004	Bacteria
Little Bull Run	Prince William	3.03	2004	Bacteria
Bull Run	Prince William, Fairfax	4.80	2004	Bacteria
		4.80	1996	Benthic
Popes Head Creek	Fairfax	4.92	2004	Bacteria
		4.92	1998	Benthic

*Currently the Occoquan River impaired segment is 1.61 miles. Based on a review of the data collected at PW Parkway, the total impaired segment will be 5.01 miles in 2006.

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Middleburg

Loudoun

Reston

The Plains

Vienna

Broad Run

Fairfax

Little Bull Run

Centreville

Haymarket

Bull Run

Broad Run

Popes Head Creek

Manassas Park

Fauquier

Manassas

South Run

Broad Run

Warrenton

Kettle Run

Occoquan River

Prince William

Woodbridge

LEGEND

DEQ Monitoring Stations for 2004 IR

#	Ambient (A)
r	Biological (B)
	Fish Tissue (FT)
#	A,B
$	A,B,FT
	Impaired Streams
	Lakes
	Rivers & Streams
	Watershed Boundaries

What is a TMDL?

- **TMDL = TOTAL MAXIMUM DAILY LOAD**

- **A TMDL is the amount of a pollutant that a waterbody can assimilate without violating water quality standards (WQS).**

- **WQS establish designated uses with numeric and narrative criteria to protect them.**

- **A TMDL considers all forms of pollution**
    - **Point sources (from a specific location like a pipe)**
    - **Non-point sources (overland runoff from rain or snowmelt with no defined source)**
    - **Natural sources like wildlife**

TMDL = WLA (point sources) + LA (NPS) + Margin of Safety

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The TMDL Process in VA

- **Three Step TMDL Process in VA**

    - **TMDL Development - Find the source(s) of the pollutant(s) causing the problems & determine the reductions needed.**

    - **Implementation Plan Development - Identify conservation measures to fix the problem. Conservation measures are often called Best Management Practices (BMPs).**

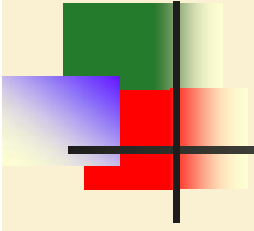   - **Implement the BMPs and sample to see improvement.**

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An Example TMDL

- **Determine reductions needed from each source to meet maximum loading.**

- **Develop source-specific allocations.**

- **Implement using existing programs and regulatory authorities, reassess, adjust effort,…**

- **Expectation of success ~ 10 years.**

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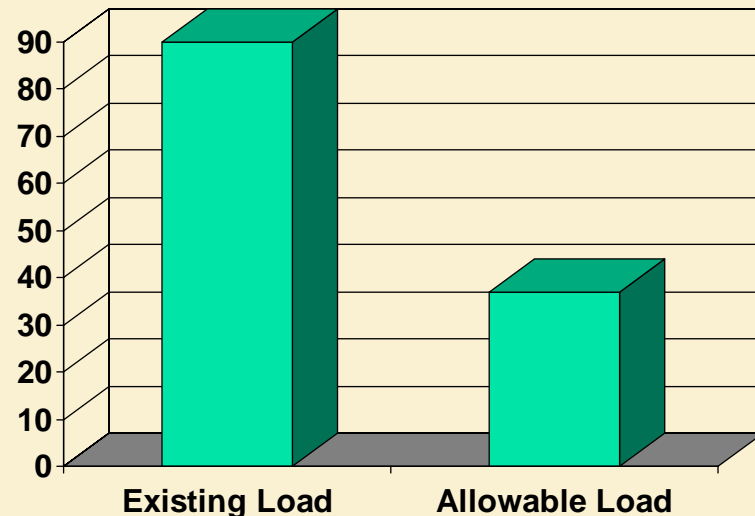
The 1st Step: TMDL Development

☑ **Introduced project at initial public meeting and Technical Advisory Committee (TAC) meeting.**

☑ **Get to know the watershed**
  - Gather and analyze data
  - Work with stakeholders and verify existing data
  - Use computer models to develop TMDLs

☑ **Received feedback from TAC and public midway through project.**

☑ **Initial modeling and allocations completed.**

☑ **TAC and public review and feedback – input will be integrated into TMDL.**

■ **Conduct a final public meeting and release a draft TMDL report (with a 30-day comment period).**

■ **Send final TMDL report to EPA and State Water Control Board for approval.**

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How can you help?

- **Provide feedback on the information provided tonight.**

- **Attend meetings and participate – provide input.**

- **Help spread the word about the TMDL project.**

Project Team Contact Information

Bryant Thomas, DEQ, NRO
Water Monitoring and Planning Supervisor
Phone: (703) 583-3843
E-mail: bhthomas@deq.virginia.gov

Raed M. El-Farhan, PhD
Senior Engineer
The Louis Berger Group, Inc.
Phone: (202) 912-0200
relfarhan@louisberger.com

http://www.deq.virginia.gov/tmdl/

Questions?

Info on TMDLs:
www.deq.virginia.gov/tmdl